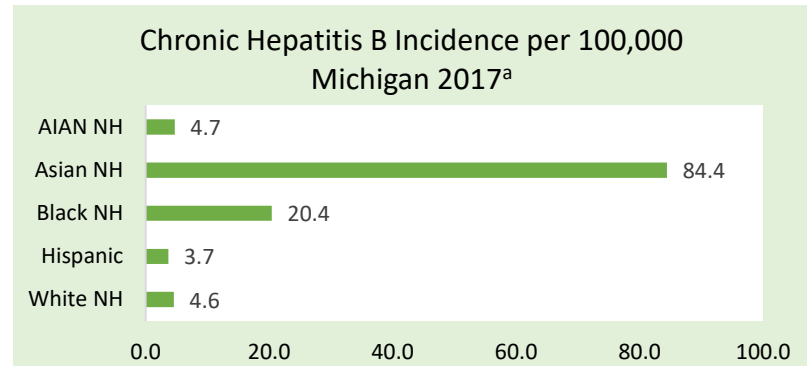


Snapshot of Health Disparities in Michigan: Chronic Hepatitis B (HB) and Liver Mortality

Chronic Hepatitis B has one of the highest population variances among chronic health conditions in Michigan, yet it is a highly preventable and treatable condition. Left untreated, Hepatitis B may lead to liver disease and liver cancer.¹

Chronic Hepatitis B Disparity

- Chronic Hepatitis B affects the Asian population at **18.3** times the rate of the White population.
- Chronic Hepatitis B affects the Black population at **4.4** times the rate of the White population.



In Michigan, approximately 73 percent of Asian Americans are foreign-born, and of those, approximately 98 percent are born in Asia. Asia and the Pacific Islands have moderate to high prevalence of chronic Hepatitis B, which may account for some of the disparity seen in chronic Hepatitis B incidence.¹ For further information on Asian Americans and Chronic Hepatitis B, including testing and vaccination recommendations, visit <https://www.cdc.gov/hepatitis/populations/api.htm>.

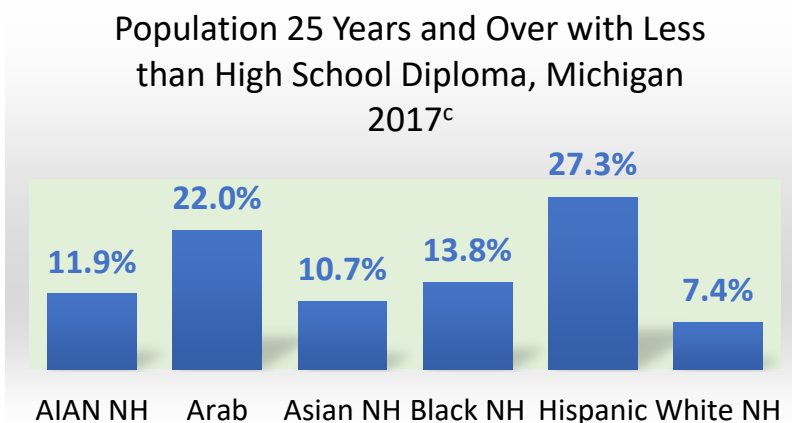
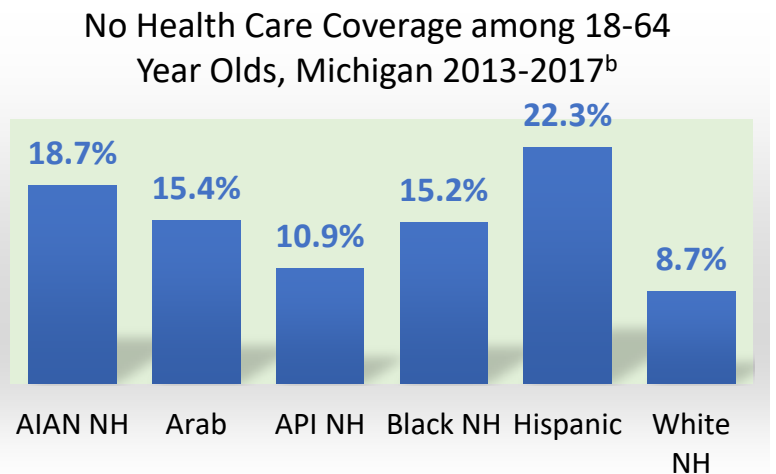
Hepatitis B and Social Determinants of Health

Lack of Health Insurance

Early diagnosis of Hepatitis B allows for earlier implementation of antiviral treatment. Individuals may also take added measures to prevent transmission, such as safe sex practices, using clean syringes and family member vaccination.² Lack of health insurance may affect the ability of individuals to seek diagnosis and treatment. All racial and ethnic minority groups experience higher rates of no health care coverage as compared to White NH.

Education

Low education level has been identified as a risk factor for Hepatitis B diagnosis, based on National Health and Nutrition Examination Survey III data.¹ All racial and ethnic minority groups experience higher rates of no high school diploma as compared to White NH.

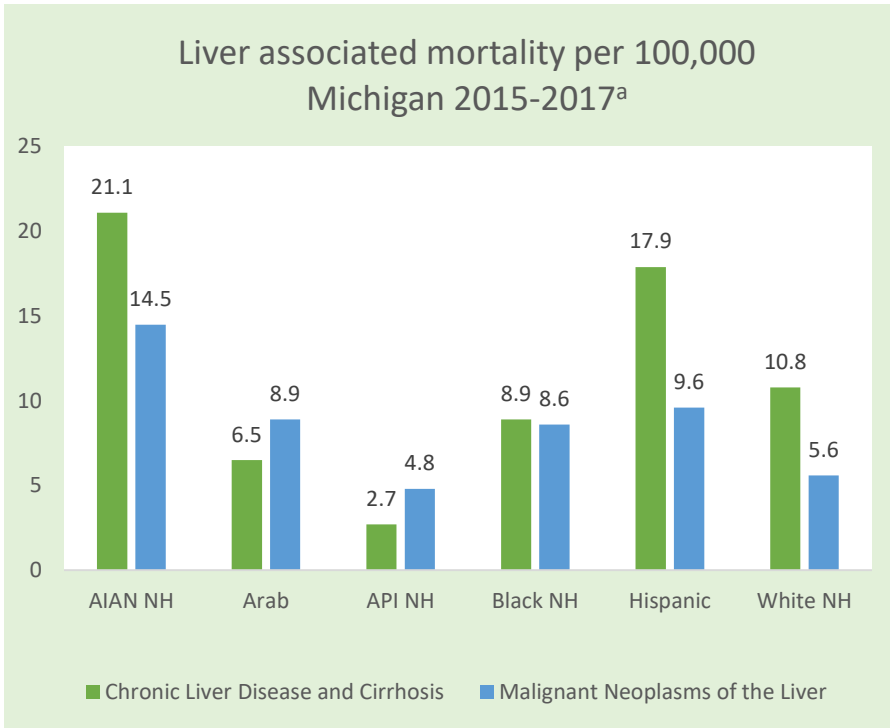


Literature Sources: 1. Centers for Disease Control and Prevention (CDC) (2016). Viral Hepatitis. <https://www.cdc.gov/hepatitis/populations/api.htm> 2. Greene, Kevin M et al. "Social Determinants of Health Associated with HBV Testing and Access to Care among Foreign-born Persons Residing in the United States: 2009 - 2012" *Journal of health disparities research and practice* vol. 10,2 (2017): 1-20.

Data Sources: a. Viral Hepatitis Surveillance and Prevention Unit, MDHHS. 2017 Hepatitis B and C Annual Surveillance Report. b American Community Survey, 2013-2017. c American Community Survey (2017)

Liver Associated Mortality

- HB accounts for 5-10 percent of chronic end stage liver disease and 10-15 percent of Hepatocellular carcinoma in the United States.
- HB is responsible for at least 5,000 US deaths annually.



Liver Mortality Disparities

Mortality due to liver disease and cirrhosis affect:

- American Indian/Alaska Native (AIAN) NH at **2.0** times the rate of Whites.
- Hispanic at **1.7** times the rate of White.

Mortality due to liver cancer affects:

- AIAN NH at **2.6** times the rate of White.
- Hispanic at **1.7** times the rate of White.
- Arab at **1.6** times the rate of White.
- Black at **1.5** times the rate of White.

Hepatitis B (and liver conditions resulting from Hepatitis B) can be prevented¹

- Do not share needles, toothbrush, or razors.
- Wear protective equipment to avoid exposure from blood or body fluids.
- Get vaccinated for Hepatitis B.
- Follow safe sex practices.

What can be done to reduce risk factors?

CDC Hi-5 Initiative²

The Health Impact in 5 Years (Hi-5) initiative highlights effective non-clinical approaches to health. Hi-5 initiatives aim to focus on social determinants and change the context to make healthy choices the easy choice.

- **Access to clean syringes is a Hi-5 initiative that aims to prevent the transmission of Hepatitis B and other blood-borne pathogens by reducing needle sharing. Needle sharing provides a direct route for disease transmission.**

Criteria for the Hi-5 initiatives include:



Evidence
based



Community
wide



Broad
Health
Impact



Results
within 5
years



Cost effective
and/or cost saving

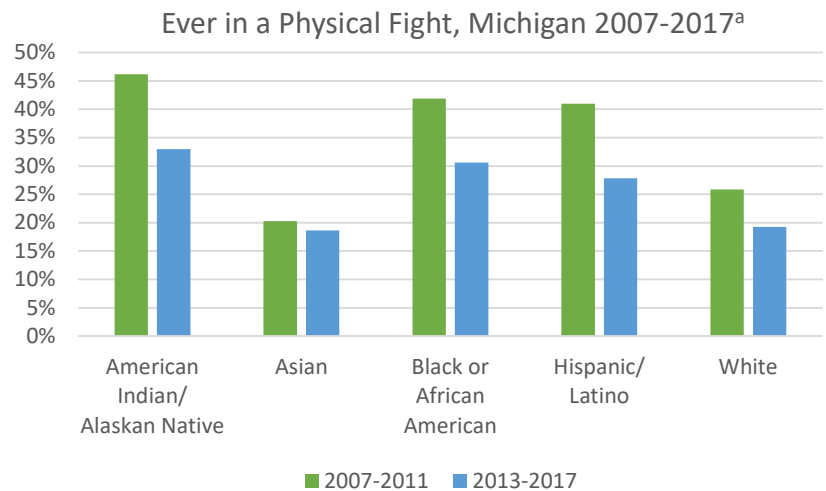
For more information visit <https://www.cdc.gov/policy/hst/hi5/index.html>

Snapshot of Health Disparities in Michigan: Youth Violence and Homicide

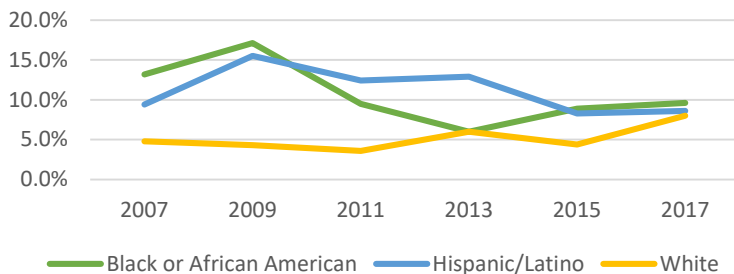
- The Centers for Disease Control and Prevention (CDC) classifies youth violence as an adverse childhood experience that is **preventable**¹
- Homicide is the third leading cause of death for persons aged 10–24 years in the United States (US)¹
- Youth violence is costly. Youth homicide and nonfatal physical assault injuries result in more than \$21 billion cost annually in the US¹
- Youth violence disproportionately affects minority populations
- The data in this brief focuses particularly on youth violence from the victim standpoint. Many of the same risk factors for being a victim of violence also impact the likelihood of perpetrating violence, and similar racial and ethnic disparities persist. For more information please visit <https://www.cdc.gov/violenceprevention/youthviolence/riskprotectivefactors.html>

Ever in a physical fight

- All youth experienced a reduction in having been involved in a physical fight between 2007-2011 and 2013-2017; American Indian/Alaska Native (AIAN), Black, and Hispanic youth consistently experienced the highest percentage of having been in a fight.
- In 2013-2017, AIAN youth were in a physical fight at **two** times higher rate of the White population, for Black and Hispanic youth the rate was **1.5** times higher.



Feelings of Unsafety Preventing School Attendance, Michigan 2007-2017^a

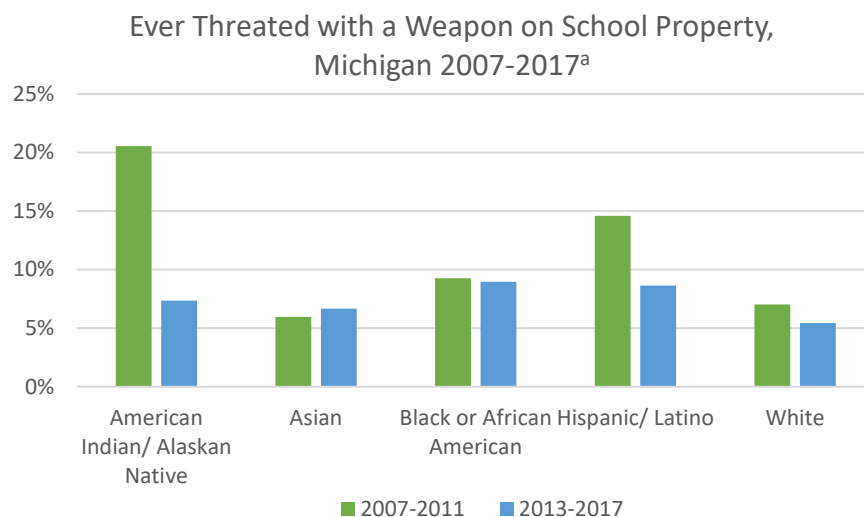


Did not go to school because they felt unsafe on their way to or from school

- White youth had a lower percentage of not going to school due to feelings of unsafety as compared to Black and Hispanic youth.
- Consistently, National Survey of Children's Health data show minority populations have a higher percentage of living in unsafe neighborhoods (Data not shown).²

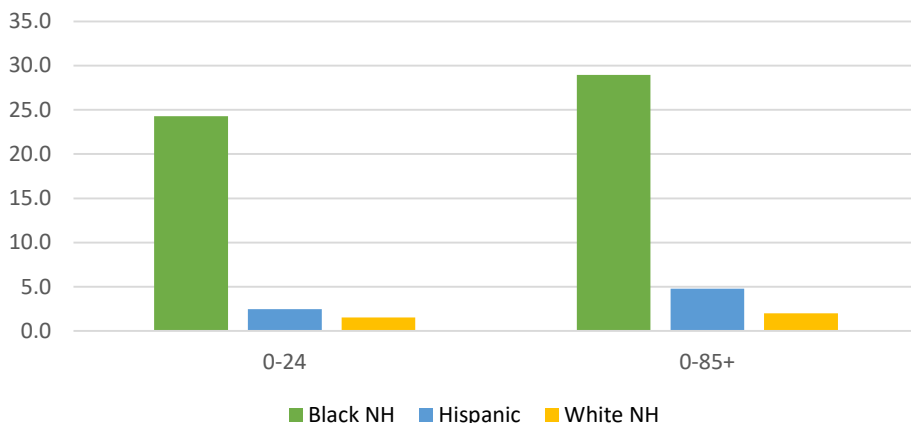
Ever Threatened with a weapon on school property

- Asian youth were the only population reporting a higher percentage of being threatened with a weapon on school property in 2013-2017 as compared to 2007-2011.
- Black, Hispanic, and AIAN youth reported a higher percentage of being threatened with a weapon on school property as compared to the White youth.



Mortality due to Homicide

Age-Adjusted Homicide Rate per 100,000,
Michigan 2015-2017^b



Homicide affects Hispanic and Black populations at a disproportionately higher rate than Whites

- Black Youth (ages 0 to 24 years) experience homicide at nearly **16** times the rate of White Youth.
- Hispanic Youth experience homicide at **1.6** times the rate of White Youth.
- When expanding the age range to include all ages (0-85+), the Black population experiences homicide at nearly **15** times the rate of the White population and the Hispanic population continues to experience homicide at over **twice** the rate of the White population.

Homicide and Youth Violence can be prevented¹

- ❑ Create protective community environments and promote supportive family environments; provide quality education early in life.
- ❑ Connect youth to caring adults and activities that strengthen youth's skills on nonviolent behaviors, communication techniques and conflict resolution strategies.
- ❑ Intervene to lessen harms and prevent future risk; implement school-based violence prevention programs.
- ❑ The CDC Essentials for Childhood Framework focuses on creating safe, stable and nurturing environments for children to prevent ACES, such as youth violence.² More information can be found at: https://www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf.

What can be done to reduce risk factors?

CDC Hi-5 Initiative³

The Health Impact in 5 Years (Hi-5) initiative highlights non-clinical approaches to health. Hi-5 initiatives aim to focus on social determinants and change the context to make healthy choices the easy choice.

- ❑ The CDC Hi-5 Initiative systematic review found school-based violence prevention programs to be associated with reductions in youth violence for all school environments regardless of race/ethnicity, grade level or socioeconomic status. The purpose of these programs are to prevent both violence perpetration and victimization.

Criteria for the Hi-5 initiative include:



Evidence
based



Community
wide



Broad
Health
Impact



Results within
5 years



Cost effective and/or
cost saving

For more information visit: <https://www.cdc.gov/policy/hst/hi5/index.html>

Literature Sources: 1 Centers for Disease Control and Prevention (CDC) (2018). Youth Violence.

<https://www.cdc.gov/violenceprevention/youthviolence/index.html>.

2. CDC (2018). Essentials for Childhood: Steps to create safe, stable, nurturing relationships and environments.

https://www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf 3. CDC (2016) The Hi-5 Interventions.

<https://www.cdc.gov/policy/hst/hi5/interventions/index.html#2>. Data Source: b. CDC National Violent Death Reporting System (2016). Data note: estimate for Hispanic youth homicide mortality should be interpreted with caution due to small sample.

Snapshot of Health Disparities in Michigan: Focus on Infant Mortality

Racial disparities affect how Michigan babies thrive. Disparities exist in infant mortality and its leading causes, including low birth weight, prematurity and sleep-related deaths.^{1,2}

If all races and ethnicities had experienced **similar** infant mortality rates in 2017, there would have been:

- **206** Black
 - **21** Hispanic
 - **6** American Indian
- fewer infant deaths.**

Out of every 1,000 babies born in Michigan:

5 White babies die before their first birthday.

8 Hispanic babies die before their first birthday.

14 American Indian babies die before their first birthday.

14 Black babies die before their first birthday.

Disparity Rates:



Hispanics infants die at nearly **twice** the rate of Whites.



American Indian infants die at nearly **three** times the rate of Whites.



Black infants die at nearly **three** times the rate of Whites.

Disparities in infant mortality in Michigan continue to persist and must be addressed to improve overall infant mortality rate.

The Lifecourse Perspective

Research has shown that a woman's exposure to various risk and protective factors influence her reproductive potential and the health of her children.³

For more information on social determinants that affect maternal outcomes, please see the Michigan Health Equity Status Report at: https://www.michigan.gov/mdhhs/0,5885,7-339-71550_2955_2985_78954---,00.html

Data source: Michigan resident infant mortality and live birth file, 2015-2017, Division for Vital Records and Health Statistics. Literature Source: 1. Infant safe sleep in Michigan: A comprehensive look at sleep-related death. Available from:

https://www.michigan.gov/documents/mdhhs/Safe_Sleep_Report_Final_1_12_2018_611613_7.pdf. 2. March of dimes, Racial and ethnic disparities in birth outcomes. Available from: https://www.marchofdimes.org/March-of-Dimes-Racial-and-Ethnic-Disparities_feb-27-2015.pdf

3. Lu MC and Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. Maternal and Child Health Journal 2003; 7(1): 13-30.

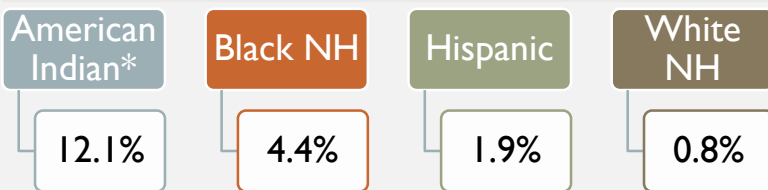
Psychosocial Determinants of Health

Psychosocial determinants of health are human interactions that can cause stress or other biological responses. Psychosocial determinants of health, along with socioeconomic and environmental determinants, differentially affect Michigan mothers. Reductions in racism, stress during pregnancy and feeling unsafe in one's neighborhood may lead to more infants living to see their first birthday.

Racism:

Studies have found a mother's self-reported experience of racism to be associated with very low birth weight and preterm infants.¹

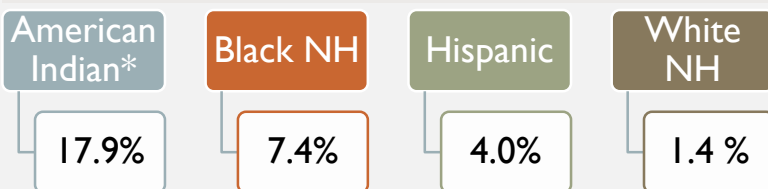
Experienced physical symptoms based on race



Physical symptoms include headache, upset stomach or pounding heart. Emotional symptoms include feeling angry, sad, or frustrated. Women reported symptoms occurring within 12 months prior to the baby's birth.

❖ American Indian mothers were **20 times** more likely to experience physical symptoms and **over 12 times** more likely to experience emotional symptoms based on race as compared to White, non-Hispanic (NH).*

Experienced emotional symptoms based on race



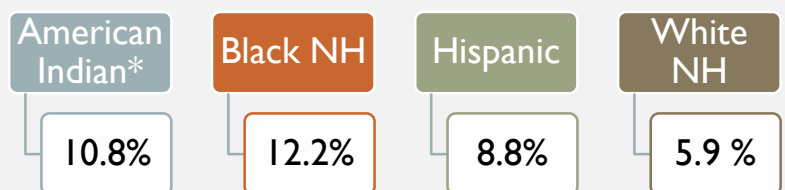
Stress:

Stress during pregnancy and throughout a mother's life has been associated with poor pregnancy and birth outcomes, including: preterm labor and delivery, low birth weight, and gestational diabetes.²

Percentage of moms experiencing six or more life stressors in year before delivery.

❖ NH Black moms reported feeling six or more life stressors at **2 times** the rate of NH White mothers.

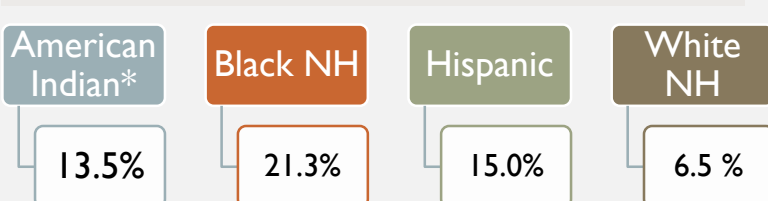
Life stressors in 12 months before delivery



Neighborhood Safety:

Feeling unsafe in one's neighborhood can be associated with maternal stress. Research has shown perceived neighborhood quality to be associated with adverse infant outcomes.³

Felt unsafe in neighborhood



Percentage of moms feeling always, often, or sometimes unsafe in neighborhood.

❖ NH Black mothers felt unsafe in their neighborhood at over **3 times** the rate of NH White mothers.

*American Indian data based on 2012-2013 American Indian PRAMS survey, rate ratio comparisons are to 2012-2013 Michigan PRAMS (data not shown).

Data Source: Michigan Pregnancy Risk Assessment Survey, 2012-2015. **Literature Sources:** 1. Patcher LM and Garcia Coll C. Racism and child health: a review of the literature and future directions. Journal of Developmental and Behavioral Pediatrics 2009; 30(3): 255-263. 2. Cardwell MS. Stress: pregnancy considerations. Obstetrical and Gynecological Survey 2013; 68(2): 119-129. 3. Bhatia et al. Association of mother's perception of neighborhood quality and maternal resilience with risk of preterm birth. International Journal of Environmental Research and Public Health 2015; 12(8) 9427-9443